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**Speaker:** Eric Riedl  
University of Illinois at Chicago

Wednesday, November 4, 2015

3:00 PM

258 Hurley Hall

**Title:** Rational Curves on Hypersurfaces

**Abstract:**

One way to understand the geometry of a variety is to understand its rational curves. Even for some relatively simple varieties, little is known about their spaces of rational curves. Many people have made previous progress on these questions, but there remain many open cases. In joint work with David Yang, we investigate the dimensions of the spaces of rational curves on very general hypersurfaces, and prove that for  $n > d+1$  or  $d > (3n+1)/2$ , the spaces of rational curves have the expected dimension, as conjectured (in various cases) by several people, including Coskun, Harris and Starr, and Voisin. In this talk, we focus our attention particularly on the  $n > d+1$  case and try to motivate some of the ideas used to attack this problem.